



UNITED STATES DEPARTMENT OF COMMERCE

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EXAMINER	
LEWIS	
ART UNIT	PAPER NUMBER
337	200

DATE MAILED: 08/05/88

This is a communication from the examiner in charge of your application.

COMMISSIONER OF PATENTS AND TRADEMARKS

This application has been examined Responsive to communication filed on _____ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input checked="" type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449 | 4. <input type="checkbox"/> Notice of informal Patent Application, Form PTO-152 |
| 5. <input checked="" type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474 | 6. <input type="checkbox"/> _____ |

Part II. SUMMARY OF ACTION

1. Claims 1 → 47 are pending in the application.

Of the above, claims _____ are withdrawn from consideration.

2. Claims _____ have been cancelled.

3. Claims _____ are allowed.

4. Claims 1 → 47 are rejected.

5. Claims _____ are objected to.

6. Claims _____ are subject to restriction or election requirement.

7. This application has been filed with informal drawings which are acceptable for examination purposes until such time as allowable subject matter is indicated.

8. Allowable subject matter having been indicated, formal drawings are required in response to this Office action.

9. The corrected or substitute drawings have been received on _____. These drawings are acceptable; not acceptable (see explanation).

10. The proposed drawing correction and/or the proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been approved by the examiner. disapproved by the examiner (see explanation).

11. The proposed drawing correction, filed _____, has been approved. disapproved (see explanation). However, the Patent and Trademark Office no longer makes drawing changes. It is now applicant's responsibility to ensure that the drawings are corrected. Corrections **MUST** be effected in accordance with the instructions set forth on the attached letter "INFORMATION ON HOW TO EFFECT DRAWING CHANGES", PTO-1474.

12. Acknowledgment is made of the claim for priority under 35 U.S.C. 119. The certified copy has been received not been received

been filed in parent application, serial no. _____; filed on _____.

13. Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. Other

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless-

2. (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-4, 6, 11-14, 20, 21, 24-27, 34, 39-41, 43 are rejected under 35 U.S.C. 102(e) as being anticipated by Fehder.

As to claim 1, Fehder discloses an apparatus for enabling visual observation of the proper placement of an endotrached tube in the trachea of a patient (Fig. 1 and Fig. 2).

Tubes (#5 and #3) define a gas path and a carbon dioxide detector (#9) is located within the gas path.

As to claim 2, tube (#3) also constitutes an adapter which is attached to a tracheal tube in operation.

As to claims 3, 4 and 6, the detector (#9) of Fehder comprises a backing and support material and an indicator material which is a pH sensitive dye (col. 3, lines 4-29 and col. 6, lines 40-48).

As to claims 12 and 13, the detector of Fehder changes from one color to another in the presence of carbon dioxide and back to the one color in the absence of carbon dioxide (col. 8, lines 44-47).

Claims 11, 14, 20, 21, 24-27, 34, 39-41 and 43 are substantially equivalent in scope to claims 1-4, 6, 12

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and 13 and as such are also anticipated by Fehder as discussed above.

4. The following is a quotation of 35 U.S.C. 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

5. Claims 5, 9, 10, 16-18, 22, 23, 29, 30, 32, 33, 35-38, 42, 46, 47 are rejected under 35 U.S.C. 103 as being unpatentable over Fehder.

As to claim 5, inasmuch as the support material of Fehder is a filter paper, and since paper is made of cellulose pulp, it would have been obvious that the support material (filter paper) of Fehder consists of cellulose.

As to claims 9 and 10, the detector of Fehder comprises a layer of material which includes sodium carbonate that is obviously capable of absorbing carbon dioxide (col. 8, lines 34-36) since carbon dioxide must be absorbed in order to cause a color change in the pH sensitive ~~dye~~.

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As to claim 16, inasmuch as the support material of Fehder is a filter paper, and since paper in general is a porous material, it would have been obvious that the support material of Fehder is porous.

As to claim 17, applicant is referred to the comments above with respect to claim 5.

As to claim 18, inasmuch as the indicating element (#9) of Fehder contains amine residues (col. 4, lines 23-41) which form a coating on the support material, it would have been obvious that the support material is amino-propyl controlled. Further, inasmuch as Fehder discloses that the support material can be a fibrous synthetic material, it would have been obvious to employ any one of a variety of fibrous synthetic materials, including glass.

As to claims 22 and 23, applicant is referred to the comments above with respect to claims 9 and 10.

The balance of the claims 29, 30, 32, 33, 35-38, 42, 46 and 47 are substantially equivalent in scope to claims 5, 9, 10, 16-18, 22 and 23 and are included in Fehder.

6. Claims 7, 8, 15, 19, 28, 31, 44 and 45 are rejected under 35 U.S.C. 103 as being unpatentable over Fehder as applied to claims 5, 9, 10, 16-18, 22, 23, 29, 30, 32, 33, 35-38, 42, 46, 47 above, and further in view of Gehring et al.

The difference between Fehder and claim 7 is a phase transport enhancer.

Gehring et al. teach a phase transport enhancer (e.g. tetrabutylammonium bromide) for the purpose of catalyzing a chemical reaction.

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Inasmuch as it is commonplace to employ catalysts in order to promote a more complete chemical reaction in a shorter amount of time and since it is important to quickly determine the proper placement of endotracheal tube of Fehder, it would have been obvious to modify Fehder to employ the phase transport enhancer of Gehring et al. to catalyze the chemical reaction between the indicator material of Fehder and exhaled carbon dioxide.

The balance of claims 8, 15, 19, 28, 31, 44 and 45 are included in Fehder as modified by Gehring et al.

Claims 39-47 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 39-47 appear to be method claims but do not recite steps for determining the proper placement of an endotracheal tube.

Claim 23 is rejected under 35 U.S.C. 112, fourth paragraph, as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 23 recites "the intubation apparatus of claim 23" which clearly does not further limit claim #23. Furthermore, it is not clear from what claim applicant intends claim #23 to depend.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The balance of the art is cited to show a relevant carbon dioxide detection apparatus.

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10. Any inquiry concerning this communication
should be directed to Aaron J. Lewis at telephone number
703-557-3125.

Lewis/vsh
(703) 557-3125
07-23-88



DAVID A. WIECKING
PRIMARY EXAMINER
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